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TEN STARS OF CLASS B HAVING THE $H\alpha$ LINE BRIGHT

On objective prism photographs secured with the 10-inch Cooke telescope, the $H\alpha$ line of hydrogen has been observed as an emission line on the dates indicated, in the stars in the following list. The general appearance of these spectra on the 10-inch plates is well illustrated by Figures 2, 4, and 5 of Plate X. The observations marked "100-inch" or "60-inch" are made in the usual photographic spectral region, with a single-prism slit spectrograph attached to the 100-inch or to the 60-inch telescope. One or more of the hydrogen lines $H\beta$, $H\gamma$, and $H\delta$ is shown by these slit spectrograms to be bright, or to consist of bright portions situated within a wider dark line, possible exceptions being HD 698, in which $H\beta$ is peculiar but probably has a bright portion, and ϵ *Piscis Australis* in which the bright portions of $H\beta$, if present, are weak and indistinct.

Star	R. A. 1900	Dec. 1900	Spect.	Mag.	Date	Observer
HD 108.....	0 ^h 0 ^m .9	+63° 7'	B	7.4	1920 Aug. 11	H
					" 29	H
					" 28	M 100-inch
					Oct. 26	M 100-inch
					" 27	M 100-inch
HD 698.....	0 6 .3	+57 39	B5	7.1	1920 Aug. 11	H
					Sept. 1	H
					Oct. 28	M 100-inch
HD 7636.....	1 11 .2	+57 6	B1	7.6	1919 Aug. 5	M
					1920 Aug. 13	H
					Sept. 12	M
					" 18	H
					" 28	M 100-inch
HD 12882....	2 1 .1	+64 33	B3	7.5	1920 Sept. 18	H
					Oct. 25	H
HD 19243....	3 0 .7	+62 0	B0	6.5	1919 Oct. 1	M
					" 2	M
					1920 Sept. 10	M
					" 28	M 100-inch
9 Camelo-						
pardalis..	4 44 .1	+66 10	B0	4.4	1920 Oct. 4	H 2 plates
					" 8	H
					" 25	H
					" 26	H
HD 37115....	5 31 .0	- 5 41	B5	8.2	1920 Sept. 18	H
					Oct. 28	M 100-inch
HD 45995....	6 25 .6	+11 19	B0	5.8	1920 Mar. 6	H
					" 7	H
					Oct. 26	M 100-inch
HR 8009.....	20 50 .6	+40 19	B8	6.5	1920 Sept. 11	M
					" 12	M 2 plates
ϵ <i>Piscis</i>						
<i>Australis</i> ..	22 35 .1	-27 34	B8	4.2	1919 July 1	M
					Aug. 4	M
					" 8	M 60-inch
					1920 Sept. 10	M
					" 28	M 100-inch

NOTES

HD 108 Remark in HD, "The spectrum appears to be nearly continuous. The dark lines are faint and show very slight contrast compared with the other portions. Bright spaces or lines are suspected. The class may be Oe5." Our plates show that this spectrum is of special interest. The hydrogen lines are bright with a dark portion on the more refrangible side, and numerous other bright lines are seen. The spectrum somewhat resembles that of *P Cygni*. A more complete description will be published in the *Contributions* from the Mount Wilson Observatory.

HD 698 $H\beta$ is peculiar, a bright portion apparently occupying an unsymmetrical position within a wider dark line.

HD 7636 Remark in HD: " $H\beta$ is not distinctly seen."

9 Camelopardalis This star is a spectroscopic binary having sharp H and K lines, whose displacements have been discussed by O. J. Lee¹.

HD 37115 This is the brighter star of the double, Burnham 2850.

ϵ *Piscis Australis* The slit spectrograms taken on 1919 Aug. 8 and 1920 Sept. 28 show that $H\beta$ is essentially an absorption line, altho it may contain very weak bright portions.

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SUMMARY OF MOUNT WILSON MAGNETIC OBSERVATIONS OF
SUN-SPOTS FOR SEPTEMBER AND OCTOBER, 1920

Since the sun-spot maximum in 1917 the decline in spot activity has been more rapid than the average. August and September were especially quiet, the four successive spotless days in September being the longest calm period since the summer of 1915. The marked increase in spot activity during October and the last week in September will bring the number of sun-spots up to nearly the normal value for this phase of the spot cycle.

¹*Astrophysical Journal*, **37**, 1, 1913.